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**HIGHWAY PATROL RETIREMENT SYSTEM**  
**STATE OF MONTANA**  
**ACTUARIAL INFORMATION REQUIRED UNDER GASB #5**  
**AS OF JUNE 30, 1992**

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**Hendrickson, Miller**  
**& Associates, Inc.**  
ACTUARIAL CONSULTANTS



Highway Patrol Retirement System  
State of Montana  
Actuarial Information Required under GASB #5  
As of June 30, 1992



# Highway Patrol Retirement System

## Table of Contents

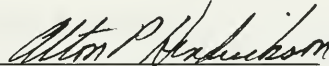
	Page
Actuarial Certification	1
Section A - Plan Description	2
Section B - Related Party Disclosures	2
Section C - Funding Status and Progress	3
Section D - Actuarially Determined Contribution Requirements and Contributions Made	4
Section E - Trend Information	5
Summary of Benefit Provisions	6



# Highway Patrol Retirement System

## Actuarial Certification

This report presents actuarial information required under Statement No. 5 of the Government Accounting Standards Board. The results presented in this report were determined with generally accepted actuarial principles and techniques, and are in compliance with our understanding of GASB #5.



Alton P. Hendrickson  
Member, American Academy of  
Actuaries





## Highway Patrol Retirement System

### Section A

#### Plan Description

- |    |    |                 |              |
|----|----|-----------------|--------------|
| 1. | A. | Covered Payroll | \$ 5,575,233 |
|    | B. | Total Payroll   | \$ 5,575,233 |

2. As of June 30, 19 92 statewide membership in the Highway Patrol Retirement System consisted of:

Retirees and Beneficiaries Currently Receiving Benefits	201
Terminated Employees Entitled to But Not Yet Receiving Benefits	9
	-----
Total Inactives	210
Current Employees:	
Vested	131
Not Vested	72
	-----
Total Current Employees	203
Total Membership	413

A summary of benefit provisions is attached as Appendix 1, and a summary of the membership can be found in the July 1, 1992 actuarial valuation.

3. Benefit and contribution provisions are established by state law and may be amended only by the State of Montana legislature.

### Section B

#### Related Party Disclosures

Hendrickson, Miller & Associates, Inc. is under contract with the Highway Patrol Retirement System to provide actuarial and consulting services with regard to the retirement plan.

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# Highway Patrol Retirement System

## Section C

### Funding Status and Progress

1. The last actuarial valuation of this system was performed as of July 1, 1992.
2. The following assumptions were used in calculation of the pension benefit obligation:

Rate of Return on Investment of Present and Future Assets - 8%  
Projected Salary Increases - Inflation - 6.5%  
Projected Salary Increases - Merit - None  
Changes in Post-Retirement Benefit - The salary of a newly confirmed patrol officer is assumed to increase 6.5% per annum.

The assumptions used in these calculations are the same as the assumptions stated in the report on the actuarial valuation of the Highway Patrol Retirement System as of July 1, 1992.

3. Actuarial Present Value of Projected Benefits:

#### Inactives:

Retirees and beneficiaries	\$ 30,688,332
Other terminated employees	218,735
	-----
Total inactives	\$ 30,907,067

#### Current employees:

Accumulated employee contributions	\$ 6,249,500
Employer financed vested	18,864,314
Employer financed nonvested	1,004,133
	-----
Total current employees	\$ 26,117,947

Total Pension Benefit Obligation	\$ 57,025,014
----------------------------------	---------------

#### Net Assets Available for Benefits:

Cost	\$ 31,167,177
Market	\$ 33,710,986
	-----

Total Unfunded Pension Benefit Obligation	\$ 25,857,837
---	---------------

There were no changes in the actuarial assumptions during the past year

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# Highway Patrol Retirement System

## Section D

### Actuarially Determined Contribution Requirements

#### And Contributions Made

The Highway Patrol Retirement System funding policy provides for periodic employer and employee contributions at rates specified by state law. The contribution requirement is not actuarially determined; however, an actuary does determine the actuarial implications of the funding requirement in a biennial actuarial valuation. The actuarial method used to determine the implications of the statutory funding level is the entry age normal funding method, with both the normal cost and the amortization of the unfunded accrued liability determined as a level percentage of payroll.

Contributions to the system for the year ending June 30, 1992 were as follows:

	Amount	% of Compensation
	-----	-----
Employer	\$ 2,433,888	43.66%
Employee	595,529	10.68
	-----	-----
Total	\$ 3,029,417	54.34%

These contributions are applied as follows:

	Amount	% of Compensation
	-----	-----
Normal Cost	\$ 1,522,596	27.31%
Amortization of Unfunded Liability	1,506,821	27.03
	-----	-----
Total	\$ 3,029,417	54.34%

During the past year, no changes were made in the method used to calculate or establish contribution requirements. The change in the law affecting benefits is described in Section C.

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1. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions. The results are given in the following table.

2. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

Compound	Reagent	Condition	Result
1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24
25	26	27	28
29	30	31	32
33	34	35	36
37	38	39	40
41	42	43	44
45	46	47	48
49	50	51	52
53	54	55	56
57	58	59	60
61	62	63	64
65	66	67	68
69	70	71	72
73	74	75	76
77	78	79	80
81	82	83	84
85	86	87	88
89	90	91	92
93	94	95	96
97	98	99	100

3. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

4. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

5. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

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7. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

8. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

9. The following data were obtained from the study of the reaction of the various compounds with the various reagents under the various conditions.

# Highway Patrol Retirement System

## Section E

### Trend Information

	As of June 30		
	1992	1991	1990
Net assets available for benefits as % of PBO	54.7%	53.2%	56.1%
Unfunded PBO as % of annual covered payroll	463.8%	476.9%	387.2%
Employer contributions as % of annual covered payroll	36.28%	26.75%	16.57%

Employer contributions have been made according to state law, and have been determined to be adequate for funding of the system by biennial actuarial valuations, as described in Section D.

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## Highway Patrol Retirement System

### Appendix 1

#### Summary of Plan Provisions

Employee Contributions -	9% of member's compensation.
State Contributions -	36.28% of members' compensation.
Retirement Benefit -	<p>Eligibility: Age 50 and 20 years of service. There is no age requirement if first employed prior to July 1, 1985.</p> <p>Normal Form: Life payments, with full benefits continuing to the surviving spouse or dependent children upon the member's death.</p> <p>Benefit: 2.5% of the final compensation for each year of service.</p>
Disability Benefit -	<p>Service disability: 50% of final compensation.</p> <p>Nonservice disability: Actuarial equivalent of accrued benefit based on retirement at age 50.</p>
Death Benefit -	<p>Service death: 50% of final compensation less any payments from workers' compensation.</p> <p>Nonservice death: Actuarial equivalent of accrued benefit based on retirement at age 50.</p>
Termination Benefit -	Prior to 5 years of service, return of member contributions. After 5 years, the member may elect the actuarial equivalent of the accrued benefit based on retirement at age 60.
Benefit Adjustments -	<p>If the benefits are less than a minimum of 2% of the base salary of a probationary officer for each year of the member's service, the benefits are to be increased to such minimum amount. The annual increase may not exceed 5% of the benefit.</p> <p>A lump sum payment will be made to members retired prior to July 1, 1991 who are at least age 55 and have been retired at least 5 years. This lump sum is funded by twenty five cents on each license registration fee. After August 31, 1993, this lump sum amount will be limited by the consumer price index increase.</p>

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